

APPENDIX C

Typical Management Actions and Best Management Practices

Vegetation Treatments (Including Fire Management Activities)

The following chemical, mechanical, manual, biological, and fire treatment methods would be used to achieve vegetation management objectives in the Planning Area.

A Chemical

BLM would use EPA-approved herbicides in accordance with EPA's Endangered Species Pesticide Program covered in the BLM's Vegetation Treatment Using Herbicides on BLM Lands in Seventeen Western States Draft PEIS (BLM 2007a). These herbicides are: Atrazine; Bromacil; Bromacil + Diuron; 2,4-D, 2,4-DP, Dicamba; Dicamba + 2,4-D; Diuron; Glyphosate; Glyphosate + 2,4-D; Hexazinone; Fosamine, Imazapyr; Picloram; Picloram + 2,4-D; Simazine; Tebuthiuron; and Triclopyr.

Buffer zones would be used adjacent to dwellings, domestic water sources, agricultural land, streams, lakes and ponds. A minimum buffer zone of 100 feet would be provided for aerial application, 25 feet for vehicle application, and 10 feet for hand application. Any deviations must be in accordance with the label for the herbicide. Herbicides would be manually applied on individual plants within 10 feet of water where application is critical. The buffer zones described above would provide additional protection to listed, proposed, and candidate species.

BLM would work closely with the USFWS to ensure that herbicide applications would not affect listed or proposed, threatened, and endangered species on a project-level basis. If adverse effects are anticipated during informal consultation, BLM would formally consult on these projects. If USFWS develops herbicide guidance for particular species that improves protection beyond the current BLM design features, BLM would consider and incorporate that guidance as it consults with USFWS on a project-level basis.

The chemicals can be applied by many different methods, and the selected technique depends on a number of variables. Some of these are: 1) the treatment objective (removal or reduction); 2) the accessibility, topography, and size of the treatment area; 3) the characteristics of the target species and the desired vegetation; 4) the location of sensitive areas in the immediate vicinity (potential environmental impacts); 5) the anticipated costs and equipment limitations; and 6) the meteorological and vegetative conditions of the treatment area at the time of treatment. Herbicide applications would be

timed to have the least impact on non-target plants and animals consistent with the objectives of the vegetation management program.

The chemicals would be applied aerially with helicopters or fixed-wing aircraft, or on the ground using vehicles or manual application devices. Helicopters are more expensive to use than fixed-wing aircraft, but they are more maneuverable and effective in areas with irregular terrain and in treating specific target vegetation in areas with many vegetation types. Manual applications are used only for treating small areas or those inaccessible by vehicle.

Rates of herbicide application would depend on the target species, other vegetation present, soil type, depth of the ground water table, and presence of water sources. When target species occur in riparian areas, the application rate would be reduced to minimize injury to non-target species.

During aerial applications, nozzles to reduce drift would be used for all liquid applications. Liquid herbicides would not be applied when wind speed exceeds 5 miles per hour, and granular herbicides would not be applied when wind speed exceeds 10 miles per hour. Herbicides would not be applied when conditions stated on the herbicide label cannot be met and when air turbulence significantly affects the desired spray pattern. Buffer zones to protect water resources would be provided according to guidance mentioned above in this appendix.

Vehicle-mounted sprayer (hand gun or boom) applications would be mainly used in open areas that are readily accessible by vehicle. The boom would be used only where feasible to treat concentrated weed infestations. The hand gun would be used for spot treatment of weeds and only up to the high water line near water bodies. Neither hand guns nor booms would be used in riparian areas where weeds are closely intermingled with native shrubs and trees. Under both hand gun and boom methods, sprays would be applied in a manner that gives the best possible coverage with the least amount of drift, and only when wind velocity is below 8 miles per hour, except in riparian areas where treatment would be applied only at wind speeds below 5 miles per hour. Boom sprayers would not be used within 25 feet of water bodies.

Hand applications could involve backpack spraying, hand wiping application, and cyclone broadcast spreading (granular formulations). Backpack sprayers are operated at low pressure and low volume and release herbicide through a single nozzle held from 0.5 to 2.5 feet above the ground when wind velocities do not exceed 8 miles per hour. Near water, wind velocities cannot exceed 5 miles per hour. Contact systemic herbicides, such as glyphosate, wiped on individual plants, would be used up to the existing high water line. Granular formulations would be applied through broadcast spreaders at about 3.5 feet above the ground and no closer than 10 feet from the high water line of streams and other water bodies.

Herbicide applications are scheduled and designed to minimize potential impacts on non-target plants and animals, while remaining consistent with the objective of the vegetation treatment program. The rates of application depend on the target species, presence, and condition of non-target vegetation, soil type, depth to the water table, presence of other water sources, and the requirements of the label.

In many circumstances, the herbicide chosen, time of treatment, and rate of application of the herbicide are different than the most ideal herbicide application for maximum control of the target plant species in order to minimize damage to the non-target plant species and to ensure minimum risk to human health and safety.

B Mechanical

Mechanical methods of vegetation treatment employ several different types of equipment to suppress, inhibit, or control herbaceous and woody vegetation (Vallentine 1980). The goal of mechanical treatments is to kill or reduce the cover of undesirable vegetation and thus encourage the growth of desirable plants. BLM uses wheel tractors, crawler-type tractors, mowers, or specially designed vehicles with attached implements for mechanical vegetation treatments. The use of mechanical equipment to reduce fuel hazards would be conducted in accordance with BLM-established procedures. Re-seeding after a mechanical treatment has been applied is important to help ensure that desirable plants would become established on the site and not invasive species. The mechanical treatment and re-seeding should occur at a time to best control the undesirable vegetation and encourage the establishment of desirable vegetation. The best mechanical method for treating undesired plants in a particular location depends on the following factors:

- Characteristics of the undesired species present such as plant density, stem size, woodiness, brittleness, and re-sprouting ability
- Need for seedbed preparation, re-vegetation, and improved water infiltration rates
- Topography and terrain
- Soil characteristics such as type, depth, amount and size of rocks, erosion potential, and susceptibility to compaction
- Climatic and seasonal conditions
- Potential cost of improvement as compared to expected results

Bulldozing is conducted with a wheeled or crawler tractor with a heavy hydraulic controlled blade. Vegetation is pushed over and uprooted, and then left in windrows or piles. Bulldozing is best adapted to removing scattered stands of large brushes or trees.

There are several different kinds of blades available depending on the type of vegetation and goals of the project. The disadvantage of bulldozing is soil disturbance and damage to non-target plant species.

C Manual

Hand-operated power tools and hand tools are used in manual vegetation treatment to cut, clear, or prune herbaceous and woody species. In manual treatments, workers would cut plants above ground level; pull, grub, or dig out plant root systems to prevent subsequent sprouting and re-growth; scalp at ground level or remove competing plants around desired vegetation; or place mulch around desired vegetation to limit the growth of competing vegetation. Hand tools such as the handsaw, axe, shovel, rake, machete, grubbing hoe, mattock (combination of axe and grubbing hoe), brush hook, and hand clippers are used in manual treatments. Axes, shovels, grubbing hoes, and mattocks can dig up and cut below the surface to remove the main root of plants such as prickly pear and mesquite that have roots that can quickly resprout in response to surface cutting or clearing. Workers also may use power tools such as chain saws and power brush saws.

Manual methods are highly labor intensive, requiring periodic retreatment, ranging from every three weeks during the growing season to annually, depending on the target species. These methods have been successful in controlling annuals and biennials, but are ineffective in controlling creeping perennials.

D Cultural Resources

Should cultural and/or paleontological resources be encountered during project ground-disturbing activities, work will cease in the area of the discovery, and the BLM cultural resource specialist will be notified immediately. Work may not resume until written authorization to proceed is issued by the BLM cultural resource specialist.

The management of cultural resources on BLM land must be in compliance with several federal laws, including the Antiquities Act of 1906; the NHPA of 1966, as amended; the NEPA of 1969; EO 11593, "Protection and Enhancement of the Cultural Environment," the FLPMA of 1976; the American Indian Religious Freedom Act of 1978; the Archaeological Resources Protection Act of 1979; the Native American Graves Protection and Repatriation Act of 1990; EO 13007, "Indian Sacred Sites," and EO 13287, "Preserve America." In addition, the BLM manages its cultural resources according to BLM Manual 8100, "The Foundation for Managing Cultural Resources," Manual 8110, "Identifying and Evaluating Cultural Resources," and Manual 8140, "Protecting Cultural Resources." These laws and regulations direct BLM to:

- Restrict public information about the locations of sites that are not allocated to public use, as allowed by law and regulation.

- Ensure that all proposed undertakings and authorizations are reviewed and conducted in compliance with applicable federal laws including Section 106 of the NHPA.
- Complete consultations with the California SHPO prior to project implementation, as necessary.
- Ensure that information on Native American religious and cultural issues receives good faith consideration during decision making and that government-to-government consultation procedures are carried out as appropriate for each proposed action.

E Paleontological Resources

If vertebrate paleontological resources and scientifically significant invertebrate and plant fossil resources are discovered, the user/operator shall suspend all operations that further disturb such materials and immediately contact the authorized officer. User/operators shall not resume until written authorization to proceed is issued by the authorized officer. The authorized officer would evaluate the discovery and inform the operator of actions that would be necessary to prevent loss of significant scientific values. The user/operator shall be responsible for the cost of any mitigation required by the authorized officer. Upon verification from the authorized officer that the required mitigation has been completed, the operator shall be allowed to resume operations.

F Special Designation Areas

Guidelines and operating procedures for all management activities in wilderness are provided in BLM Manual 8560, Management of Designated Wilderness Areas, and in Wilderness Management Plans, where completed for specific wilderness areas.

ACECs are established through the land use planning process. The desired conditions and management prescriptions for these special areas would be considered in implementing management activities.

Wildland Fire Management

A Appropriate Management Response

The appropriate management response concept represents a range of available management responses to wildland fires. Responses range from full fire suppression to managing fires for resource benefits (fire use). Management responses applied to a fire would be identified in the fire management plans and would be based on objectives derived from the land use allocations; relative risk to resources, the public and fire

fighters; potential complexity; and the ability to defend management boundaries. Any wildland fire can be aggressively suppressed, and any fire that occurs in an area designated for fire use can be managed for resource benefits if it meets the prescribed criteria from an approved fire management plan.

B Fire Suppression Actions

Suppression tactics would be utilized that limit damage or disturbance to the habitat and landscape. No heavy equipment would be used (such as dozers), unless approved by the Field Office Manager.

Use of fire retardants or chemicals adjacent to waterways would be accomplished in accordance with the *Environmental Guidelines for Delivery of Retardant or Foam Near Waterways: Interagency Standards for Fire and Aviation Operations* (National Interagency Fire Center 2009).

The general and species-specific Conservation Measures would be implemented to the extent possible to minimize adverse effects to federally listed, proposed, or candidate species occurring within the action area.

For fire suppression activities in PMV critical habitat, a protocol for consultation would be developed as a part of the BO. This programmatic consultation would contain conservation measures and prescriptions for use in fire suppression activities. Emergency consultation should only be needed in the future, if suppression actions fall outside of these prescriptions/measures. The BO would outline coordination needs for emergency response actions that may affect a listed/proposed species and/or critical habitat. The following protocol would apply: BLM would contact the appropriate USFWS biologist as soon as practical once a wildfire starts and a determination is made that a federally protected species and/or its habitat could be affected by the fire and/or fire suppression activities. USFWS would work with BLM during the emergency response to apply the appropriate conservation measures. When conservation measures cannot be applied during the suppression activities, BLM would, after the fact, need to consult on any suppression actions that may have affected the federally protected species or its habitat. If conservation measures are adhered to, BLM would report on the actions taken and effects to the species and its habitat following the fire, but no further consultation on that incident would be required.

In WAs, minimum impact suppression tactics would be applied and coordinated with WA management objectives and guidelines when fire suppression actions are required (National Interagency Fire Center 2009).

C Cultural Resources

All known cultural resources would be protected from disturbance to the extent possible.

Should cultural resources be encountered during wildland fire suppression, the BLM cultural resource specialist will be notified immediately. Work may not resume until written authorization to proceed is issued by the BLM cultural resource specialist.

D Paleontological Resources

If vertebrate paleontological resources and scientifically significant invertebrate and plant fossil resources are discovered, during wildland fire suppression, the BLM or appropriate resource advisor will be notified as soon as possible.

Discretionary Construction Activities

The following measures would reduce fugitive dust impacts:

1. All unpaved construction areas shall be sprinkled with water or other acceptable ICAPCD dust control agents during dust-generating activities to reduce dust emissions. Additional watering or acceptable ICAPCD dust control agents shall be applied during dry weather or windy days until dust emissions are not visible.
2. Trucks hauling dirt and debris shall be covered to reduce windblown dust and spills.
3. On dry days, dirt or debris spilled onto paved surfaces shall be swept up immediately to reduce resuspension of particulate matter caused by vehicle movement. Approach routes to construction sites shall be cleaned daily of construction-related dirt in dry weather.
4. On-site stockpiles of excavated material shall be covered or watered.
5. Automatic water or mist or sprinkler system should be installed in areas of rock crushing and conveyor belt systems.
6. Use low pollutant-emitting construction equipment.
7. Equip construction equipment with prechamber diesel engines (or equivalent) together with proper maintenance and operation to reduce emissions of nitrogen oxide, to the extent available and feasible.
8. Use electrical construction equipment, to the extent feasible.

A Cultural Resources

All known cultural resources would be protected from disturbance.

Should cultural resources be encountered during project ground-disturbing activities, work will cease in the area of the discovery, and the BLM cultural resource specialist will be notified immediately. Work may not resume until written authorization to proceed is issued by the BLM cultural resource specialist.

The management of cultural resources on BLM land must be in compliance with several federal laws, including the Antiquities Act of 1906; the NHPA of 1966, as amended; the NEPA of 1969; EO 11593, "Protection and Enhancement of the Cultural Environment," the Federal Land Policy and Management Act of 1976; the American Indian Religious Freedom Act of 1978; the Archaeological Resources Protection Act of 1979; the Native American Graves Protection and Repatriation Act of 1990; EO 13007, "Indian Sacred Sites," and EO 13287, "Preserve America." In addition, the BLM manages its cultural resources according to BLM Manual 8100 through 8170, and in accordance with the statewide protocol from the California SHPO and other guidelines from the SHPO. These laws and regulations direct BLM to:

- Restrict public information about the locations of sites that are not allocated to public use, as allowed by law and regulation.
- Ensure that all proposed undertakings and authorizations are reviewed and conducted in compliance with applicable federal laws including Section 106 of the NHPA.
- Complete consultations with the California SHPO prior to project implementation, as necessary.
- Ensure that information on Native American religious and cultural issues receives good faith consideration during decision making and that government-to-government consultation procedures are carried out as appropriate for each proposed action.

B Paleontological Resources

If vertebrate paleontological resources and scientifically significant invertebrate and plant fossil resources are discovered, the user/operator shall suspend all operations that further disturb such materials and immediately contact the authorized officer. User/operators shall not resume until written authorization to proceed is issued by the authorized officer. The authorized officer would evaluate the discovery and inform the operator of actions that would be necessary to prevent loss of significant scientific values. The user/operator shall be responsible for the cost of any mitigation required by

the authorized officer. Upon verification from the authorized officer that the required mitigation has been completed, the operator shall be allowed to resume operations.

C Special Designation Areas

Guidelines and operating procedures for all management activities in wilderness are provided in BLM Manual 8560, *Management of Designated Wilderness Areas*, and in Wilderness Management Plans, where completed for specific wilderness areas.

ACECs are established through the land use planning process. The desired conditions and management prescriptions for these special areas would be considered in implementing management activities.

D Visual Resources

There are numerous design techniques for Visual Resources that can be used to reduce the visual impacts from surface-disturbing projects. These techniques should be used in conjunction with BLM's visual resource contrast rating process wherein both the existing landscape and the proposed development or activity are analyzed for their basic elements of form, line, color, and texture. Design techniques are discussed in the BLM VRM Manual (MS 8400) in terms of fundamentals and strategies. The fundamentals and strategies are all interrelated, and when used together, can help resolve visual impacts from proposed activities or developments. Guidance and BMP for visual resources include the Visual Contrast Rating Handbook H-8431-1, the PEIS for Wind Energy Development (Record of Decision [ROD] signed in December 2005), PEIS for Geothermal Energy Development (ROD signed in December 2008), West-wide Corridor Programmatic EIS (November 2008), the Final PEIS for Solar Energy Development in Six Southwestern States (July 2012), and the BLM VRM website (<http://www.blm.gov/vrm>).

Design fundamentals are general design principles that can be used for all forms of activity or development, regardless of the resource value being addressed. Applying these three fundamentals will help solve most visual design problems:

- Proper siting or location
- Reducing unnecessary disturbance
- Repeating the elements of form, line, color, and texture

Design strategies are more specific activities that can be applied to address visual design problems. Not all of these strategies will be applicable to every proposed project or activity:

- Color selection
- Earthwork
- Vegetative manipulation
- Structures
- Reclamation/restoration
- Linear alignment design considerations

Wildlife Habitat Activities

A Typical Habitat Improvements

Following is a discussion of typical design features, construction practices, and implementation procedures for habitat improvements that could be constructed following approval of the RAMP/ROD. The extent, location, and timing of such actions would be based on specific management objectives adopted through the evaluation process, interdisciplinary development and analysis of proposed actions, and funding.

Wildlife Waters and Reservoirs: Water developments would include design features to ensure safety and accessibility to water by desirable wildlife. These features will include ramps to allow wildlife to escape, should they become trapped.

Vending

- Vending would continue to be permitted seven days a week at long-term vending areas.
- Vending would be permitted from October 1 through May 31 from noon Thursday through noon Monday at the short-term vending areas. All vending materials, supplies, and related vending material would be required to be physically removed from the Planning Area from Monday at noon to Thursday at noon.
- Vending would be expanded to include seven days a week vending from noon on December 25 through noon on the Monday following January 1.
- Vending would be expanded to include the seven days prior to Easter.
- Vending would be allowed on all observed federal holidays.

- Vending would be allowed from noon the Thursday before Thanksgiving to noon the Monday following Thanksgiving.
- Non-recreational commercial activities (such as filming) would not be routinely allowed during the high use holiday periods.

Wind Energy

The BMP for wind energy are adopted from the Implementation of a Wind Energy Development Program and Associated Land Use Plan Amendments ROD (December 2005). These BMP are as follows:

A Best Management Practices

The BMP will be adopted as required elements of project-specific PODs and/or as ROW authorization stipulations. They are categorized by development activity: site monitoring and testing, development of the POD, construction, operation, and decommissioning. The BMP for development of the POD identify required elements of the POD needed to address potential impacts associated with subsequent phases of development.

A.1 Site Monitoring and Testing

- The area disturbed by installation of meteorological towers (i.e., footprint) shall be kept to a minimum.
- Existing roads shall be used to the maximum extent feasible. If new roads are necessary, they shall be designed and constructed to the appropriate standard.
- Meteorological towers shall not be located in sensitive habitats or in areas where ecological resources known to be sensitive to human activities (e.g., prairie grouse) are present. Installation of towers shall be scheduled to avoid disruption of wildlife reproductive activities or other important behaviors.
- Meteorological towers installed for site monitoring and testing shall be inspected periodically for structural integrity.

A.2 Plan of Development Preparation

A.2.1 General

- The BLM and operators shall contact appropriate agencies, property owners, and other stakeholders early in the planning process to identify potentially sensitive land

uses and issues, rules that govern wind energy development locally, and land use concerns specific to the region.

- Available information describing the environmental and sociocultural conditions in the vicinity of the proposed project shall be collected and reviewed as needed to predict potential impacts of the project.
- The Federal Aviation Administration (FAA)-required notice of proposed construction shall be made as early as possible to identify any air safety measures that would be required.
- To plan for efficient use of the land, necessary infrastructure requirements shall be consolidated wherever possible, and current transmission and market access shall be evaluated carefully.
- The project shall be planned to utilize existing roads and utility corridors to the maximum extent feasible, and to minimize the number and length/size of new roads, lay-down areas, and borrow areas.
- A monitoring program shall be developed to ensure that environmental conditions are monitored during the construction, operation, and adaptive management strategies, shall be established at the project level to ensure that potential adverse impacts of wind energy development are mitigated. The monitoring program shall identify the monitoring requirements for each environmental resource present at the site, establish metrics against which monitoring observations can be measured, identify potential mitigation measures, and establish protocols for incorporating monitoring observations and additional mitigation measures into standard operating procedures and BMP.
- “Good housekeeping” procedures shall be developed to ensure that during operation the site will be kept clean of debris, garbage, fugitive trash or waste, and graffiti; to prohibit scrap heaps and dumps; and to minimize storage yards.

A.2.2 Wildlife and Other Ecological Resources

- Operators shall review existing information on species and habitats in the vicinity of the project area to identify potential concerns.
- Operators shall conduct surveys for federal and/or state-protected species and other species of concern (including special status plant and animal species) within the project area and design the project to avoid (if possible), minimize, or mitigate impacts to these resources.
- Operators shall identify important, sensitive, or unique habitats in the vicinity of the project and design the project to avoid (if possible), minimize, or mitigate impacts to

these habitats (e.g., locate the turbines, roads, and ancillary facilities in the least environmentally sensitive areas; i.e., away from riparian habitats, streams, wetlands, drainages, or critical wildlife habitats).

- The BLM will prohibit the disturbance of any population of federally listed plant species.
- Operators shall evaluate avian and bat use of the project area and design the project to minimize or mitigate the potential for bird and bat strikes (e.g., development shall not occur in riparian habitats and wetlands). Scientifically rigorous avian and bat use surveys shall be conducted; the amount and extent of ecological baseline data required shall be determined on a project basis.
- Turbines shall be configured to avoid landscape features known to attract raptors, if site studies show that placing turbines there would pose a significant risk to raptors.
- Operators shall determine the presence of bat colonies and avoid placing turbines near known bat hibernation, breeding, and maternity/nursery colonies; in known migration corridors; or in known flight paths between colonies and feeding areas.
- Operators shall determine the presence of active raptor nests (i.e., raptor nests used during the breeding season). Measures to reduce raptor use at a project site (e.g., minimize road cuts, maintain either no vegetation or nonattractive plant species around the turbines) shall be considered.
- A habitat restoration plan shall be developed to avoid (if possible), minimize, or mitigate negative impacts on vulnerable wildlife while maintaining or enhancing habitat values for other species. The plan shall identify revegetation, soil stabilization, and erosion reduction measures that shall be implemented to ensure that all temporary use areas are restored. The plan shall require that restoration occur as soon as possible after completion of activities to reduce the amount of habitat converted at any one time and to speed up the recovery to natural habitats.
- Procedures shall be developed to mitigate potential impacts to special status species. Such measures could include avoidance, relocation of project facilities or lay-down areas, and/or relocation of biota.
- Facilities shall be designed to discourage their use as perching or nesting substrates by birds. For example, power lines and poles shall be configured to minimize raptor electrocutions and discourage raptor and raven nesting and perching.

A.2.3 Visual Resources

- The public shall be involved and informed about the visual site design elements of the proposed wind energy facilities. Possible approaches include conducting public

forums for disseminating information, offering organized tours of operating wind developments, and using computer simulation and visualization techniques in public presentations.

- Turbine arrays and turbine design shall be integrated with the surrounding landscape. Design elements to be addressed include visual uniformity, use of tubular towers, proportion and color of turbines, nonreflective paints, and prohibition of commercial messages on turbines.
- Other site design elements shall be integrated with the surrounding landscape. Elements to address include minimizing the profile of the ancillary structures, burial of cables, prohibition of commercial symbols, and lighting. Regarding lighting, efforts shall be made to minimize the need for and amount of lighting on ancillary structures.

A.2.4 Roads

An access road siting and management plan shall be prepared incorporating existing BLM standards regarding road design, construction, and maintenance such as those described in the BLM 9113 Manual (BLM 1985) and the *Surface Operating Standards for Oil and Gas Exploration and Development* (RMRCC 1989; i.e., the Gold Book).

A.2.5 Ground Transportation

- A transportation plan shall be developed, particularly for the transport of turbine components, main assembly cranes, and other large pieces of equipment. The plan shall consider specific object sizes, weights, origin, destination, and unique handling requirements and shall evaluate alternative transportation approaches. In addition, the process to be used to comply with unique state requirements and to obtain all necessary permits shall be clearly identified.
- A traffic management plan shall be prepared for the site access roads to ensure that no hazards would result from the increased truck traffic and that traffic flow would not be adversely impacted. This plan shall incorporate measures such as informational signs, flaggers when equipment may result in blocked throughways, and traffic cones to identify any necessary changes in temporary lane configuration.

A.2.6 Noise

Proponents of a wind energy development project shall take measurements to assess the existing background noise levels at a given site and compare them with the anticipated noise levels associated with the proposed project.

A.2.7 Noxious Weeds and Pesticides

- Operators shall develop a plan for control of noxious weeds and invasive species, which could occur as a result of new surface disturbance activities at the site. The plan shall address monitoring, education of personnel on weed identification, the manner in which weeds spread, and methods for treating infestations. The use of certified weed-free mulching shall be required. If trucks and construction equipment are arriving from locations with known invasive vegetation problems, a controlled inspection and cleaning area shall be established to visually inspect construction equipment arriving at the project area and to remove and collect seeds that may be adhering to tires and other equipment surfaces.
- If pesticides are used on-site, an integrated pest management plan shall be developed to ensure that applications would be conducted within the framework of BLM and DOI policies and entail only the use of EPA-registered pesticides. Pesticide use shall be limited to nonpersistent, immobile pesticides and shall only be applied in accordance with label and application permit directions and stipulations for terrestrial and aquatic applications.

A.2.8 Cultural/Historic Resources

- The BLM will consult with Indian Tribal governments early in the planning process to identify issues regarding the proposed wind energy development, including issues related to the presence of cultural properties, access rights, disruption to traditional cultural practices, and impacts to visual resources important to the tribe(s).
- The presence of archaeological sites and historic properties in the area of potential effect shall be determined on the basis of a records search of recorded sites and properties in the area and/or, depending on the extent and reliability of existing information, an archaeological survey. Archaeological sites and historic properties present in the area of potential effect shall be reviewed to determine whether they meet the criteria of eligibility for listing on the NRHP.
- When any ROW application includes remnants of a National Historic Trail, is located within the viewshed of a National Historic Trail's designated centerline, or includes or is within the viewshed of a trail eligible for listing on the NRHP, the operator shall evaluate the potential visual impacts to the trail associated with the proposed project and identify appropriate mitigation measures for inclusion as stipulations in the POD.
- If cultural resources are present at the site, or if areas with a high potential to contain cultural material have been identified, a cultural resources management plan (CRMP) shall be developed. This plan shall address mitigation activities to be taken for cultural resources found at the site. Avoidance of the area is always the preferred mitigation option. Other mitigation options include archaeological survey and

excavation (as warranted) and monitoring. If an area exhibits a high potential, but no artifacts were observed during an archaeological survey, monitoring by a qualified archaeologist could be required during all excavation and earthmoving in the high-potential area. A report shall be prepared documenting these activities. The CRMP also shall: 1) establish a monitoring program, 2) identify measures to prevent potential looting/vandalism or erosion impacts, and 3) address the education of workers and the public to make them aware of the consequences of unauthorized collection of artifacts and destruction of property on public land.

A.2.9 Paleontological Resources

- Operators shall determine whether paleontological resources exist in a project area on the basis of the geologic context of the area, a records search for past paleontological finds in the area, and/or, depending on the extent of existing information, a paleontological survey.
- If paleontological resources are present at the site, or if areas with a high potential to contain paleontological material have been identified, a paleontological resources management plan shall be developed. This plan shall include a mitigation plan for collection of the fossils; mitigation could include avoidance, removal of fossils, or monitoring. If an area exhibits a high potential but no fossils were observed during survey, monitoring by a qualified paleontologist could be required during all excavation and earthmoving in the sensitive area. A report shall be prepared documenting these activities. The paleontological resources management plan also shall: 1) establish a monitoring program, 2) identify measures to prevent potential looting/vandalism or erosion impacts, and 3) address the education of workers and the public to make them aware of the consequences of unauthorized collection of fossils on public land.

A.2.10 Hazardous Materials and Waste Management

- Operators shall develop a hazardous materials management plan addressing storage, use, transportation, and disposal of each hazardous material anticipated to be used at the site. The plan shall identify all hazardous materials that would be used, stored, or transported at the site. It shall establish inspection procedures, storage requirements, storage quantity limits, inventory control, nonhazardous product substitutes, and disposition of excess materials. The plan shall also identify requirements for notices to federal and local emergency response authorities and include emergency response plans.
- Operators shall develop a waste management plan identifying the waste streams that are expected to be generated at the site and addressing hazardous waste determination procedures, waste storage locations, waste-specific management and

disposal requirements, inspection procedures, and waste minimization procedures. This plan shall address all solid and liquid wastes that may be generated at the site.

- Operators shall develop a spill prevention and response plan identifying where hazardous materials and wastes are stored on-site, spill prevention measures to be implemented, training requirements, appropriate spill response actions for each material or waste, the locations of spill response kits on-site, a procedure for ensuring that the spill response kits are adequately stocked at all times, and procedures for making timely notifications to authorities.

A.2.11 Storm Water

Operators shall develop a storm water management plan for the site to ensure compliance with applicable regulations and prevent off-site migration of contaminated storm water or increased soil erosion.

A.2.12. Human Health and Safety

- A safety assessment shall be conducted to describe potential safety issues and the means that would be taken to mitigate them, including issues such as site access, construction, safe work practices, security, heavy equipment transportation, traffic management, emergency procedures, and fire control.
- A health and safety program shall be developed to protect both workers and the general public during construction, operation, and decommissioning of a wind energy project. Regarding occupational health and safety, the program shall identify all applicable federal and state occupational safety standards; establish safe work practices for each task (e.g., requirements for personal protective equipment and safety harnesses; Occupational Safety and Health Administration standard practices for safe use of explosives and blasting agents; and measures for reducing occupational electric and magnetic fields [EMF] exposures); establish fire safety evacuation procedures; and define safety performance standards (e.g., electrical system standards and lightning protection standards). The program shall include a training program to identify hazard training requirements for workers for each task and establish procedures for providing required training to all workers. Documentation of training and a mechanism for reporting serious accidents to appropriate agencies shall be established.
- Regarding public health and safety, the health and safety program shall establish a safety zone or setback for wind turbine generators from residences and occupied buildings, roads, ROWs, and other public access areas that is sufficient to prevent accidents resulting from the operation of wind turbine generators. It shall identify requirements for temporary fencing around staging areas, storage yards, and excavations during construction or decommissioning activities. It shall also identify

measures to be taken during the operation phase to limit public access to hazardous facilities (e.g., permanent fencing would be installed only around electrical substations, and turbine tower access doors would be locked).

- Operators shall consult with local planning authorities regarding increased traffic during the construction phase, including an assessment of the number of vehicles per day, their size, and type. Specific issues of concern (e.g., location of school bus routes and stops) shall be identified and addressed in the traffic management plan.
- If operation of the wind turbines is expected to cause significant adverse impacts to nearby residences and occupied buildings from shadow flicker, low-frequency sound, or EMF, site-specific recommendations for addressing these concerns shall be incorporated into the project design (e.g., establishing a sufficient setback from turbines).
- The project shall be planned to minimize electromagnetic interference (e.g., impacts to radar, microwave, television, and radio transmissions) and comply with Federal Communications Commission regulations. Signal strength studies shall be conducted when proposed locations have the potential to impact transmissions. Potential interference with public safety communication systems (e.g., radio traffic related to emergency activities) shall be avoided.
- The project shall be planned to comply with FAA regulations, including lighting regulations, and to avoid potential safety issues associated with proximity to airports, military bases or training areas, or landing strips.
- Operators shall develop a fire management strategy to implement measures to minimize the potential for a human-caused fire.